

Title (en)

Process of preparing catalyst supporting highly dispersed metal particles.

Title (de)

Verfahren zur Herstellung eines hochdisperse Metallteilchen enthaltenden Trägerkatalysators.

Title (fr)

Procédé de préparation d'un catalyseur comprenant des particules métalliques finement dispersés sur un support.

Publication

EP 0549543 A2 19930630 (EN)

Application

EP 92830652 A 19921203

Priority

JP 34872991 A 19911204

Abstract (en)

Disclosed is a process of preparing a catalyst supporting highly metal particles comprising, in the presence of carbon monoxide in a solution containing a metal-containing ion and a support on which metal particles produced by reduction of the metal-containing ion are supported, reducing by means of a reductant the metal-containing ion to the corresponding metal particles which are then supported on the support. According to the process of the present invention, because of the presence of the carbon monoxide which is supposed to have a function of depressing the deposition of a new metal particle present around the metal particles supported on the support, that is, the growth of the metal particles and another function of preventing the agglomeration among the metal particles supported, the catalyst of excellent properties having the metal particles supported and monodispersed on the support with the narrow particle size distribution can be prepared of which an average particle size is not more than 20 ANGSTROM . After the preparation of the catalyst, the carbon monoxide can be easily taken out from the system so that no harmful effects are produced by the employment of the carbon monoxide. <IMAGE>

IPC 1-7

B01J 23/40; B01J 37/03; H01M 4/92

IPC 8 full level

B01J 23/40 (2006.01); **B01J 37/02** (2006.01); **B01J 37/03** (2006.01); **B01J 37/16** (2006.01); **H01M 4/92** (2006.01)

CPC (source: EP US)

B01J 23/40 (2013.01 - EP US); **B01J 37/0215** (2013.01 - EP US); **B01J 37/031** (2013.01 - EP US); **H01M 4/92** (2013.01 - EP US);
H01M 4/925 (2013.01 - EP US); **H01M 4/926** (2013.01 - EP US); **H01M 4/921** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP)

Cited by

EP1156543A3; EP0899013A1; FR2767722A1; EP0899012A1; FR2767721A1; DE19756880A1; EP0924784A1; US6066410A; US6288295B1;
US6197721B1; WO9918623A3; US7357960B2; US7871675B2

Designated contracting state (EPC)

DE GB IT

DOCDB simple family (publication)

EP 0549543 A2 19930630; EP 0549543 A3 19930818; EP 0549543 B1 19960320; DE 69209261 D1 19960425; DE 69209261 T2 19961031;
JP H06106076 A 19940419; US 5275999 A 19940104

DOCDB simple family (application)

EP 92830652 A 19921203; DE 69209261 T 19921203; JP 34872991 A 19911204; US 98520792 A 19921203